

What is claimed is:

1. An ATM network system which comprises a network device and a plurality of user devices, wherein:

5 said network device receives a first specific ATM cell from a user device, and transmits a second specific ATM cell which is loaded with a proper VPI value on an information field; and

said user device transmits said first specific ATM cell, receives said second specific ATM cell, and holds said proper VPI.

10 2. The ATM network system according to Claim 1, wherein:

said user device includes a confirmation means for transmitting a third specific ATM cell, after holding said proper VPI, and for receiving a fourth specific ATM cell; and

15 said network device includes a confirmation response means for transmitting a fourth specific ATM cell in response to said third specific ATM cell.

3. The ATM network system according to Claim 1, wherein:

20 said user device includes an initialization means for initializing said proper VPI, wherein said initialization means transmits a fifth specific ATM cell, and receives a sixth specific ATM cell; and

25 said network device includes a transmission means for transmitting said sixth specific ATM cell in response to said fifth specific ATM cell.

4. The ATM network system according to Claim 3, wherein:

said user device includes an initialization confirmation

means for transmitting a seventh specific ATM cell, after initializing said proper VPI, and for receiving an eighth specific ATM cell; and

5 said network device includes an initialization confirmation response means for transmitting said eighth specific ATM cell in response to said seventh specific ATM cell.

5. The ATM network system according to Claim 1, wherein:

10 a number of said user devices connected with a channel of said network device is limited within a prescribed number; and

said proper VPI is different from each other within a channel of said network device which transmits said fifth specific ATM cell.

15 6. The ATM network system according to Claim 3, wherein said transmission means transmits in response to said fifth specific ATM cell said sixth specific ATM cell towards all of said user devices which are connected with a channel of said network device.

20 7. The ATM network system according to Claim 1, wherein said user device transmits said first specific ATM cell, after completing a connection with said network device.

8. The ATM network system according to Claim 1, wherein said specific ATM cell has a specific VPI and VCI in
25 its cell header.

9. A VPI allocation method for an ATM network system including a network device and a plurality of user devices, which comprises said steps of:

a first transmission step for transmitting a first specific

ATM cell from a user device to said network device;

a second transmission step for transmitting in response to said first specific ATM cell a second specific ATM cell loaded with a proper VPI in its information; and

5 a holding step for holding said proper VPI in said user device, after receiving said second specific ATM cell.

10 10. The VPI allocation method for an ATM network system including a network device and a plurality of user devices according to Claim 9, which further comprises said steps of:

a third transmission step for transmitting a third specific ATM cell for notifying an arrival of said proper VPI, from said user device to said network device;

15 a fourth transmission step for transmitting in response to said third specific ATM cell a fourth specific ATM cell; and

a receiving step for receiving said fourth specific ATM cell at said user device.

20 11. The VPI allocation method for an ATM network system including a network device and a plurality of user devices according to Claim 9, which further comprises said steps of:

a fifth transmission step for transmitting, from said user device to said network device, a fifth specific ATM cell for requesting an initialization of said proper VPI;

25 a sixth transmission step for transmitting from said network device to said user device a sixth specific ATM cell for permitting said request, in response to said fifth specific ATM cell; and

an initializing step for initializing said proper VPI held by

said user device.

12. The VPI allocation method for an ATM network system including a network device and a plurality of user devices according to Claim 11, which further comprises said
5 steps of:

a seventh transmission step for transmitting a seven specific ATM cell for notifying an execution of said initialization, from said user device towards said network device, after said initializing step;

10 an eighth transmission step for transmitting in response to said seventh specific ATM cell an eighth specific ATM cell from said network device to said user device; and

a receiving step for receiving said eighth specific ATM cell at said user device.

15 13. The VPI allocation method for an ATM network system including a network device and a plurality of user devices according to Claim 9, wherein said proper VPI is different from each other within a channel of said network device.

20 14. The VPI allocation method for an ATM network system including a network device and a plurality of user devices according to Claim 9, which further comprises said steps of:

a fifth transmission step for transmitting a fifth specific
25 ATM cell for requesting an initialization of said proper VPI, from said user device towards said network device;

a sixth transmission step for transmitting a sixth specific ATM cell for permitting said request, from said network device to all of said user devices which are connected with a

channel which is connected to said user device which transmits said fifth specific ATM cell; and

an initializing step for initializing said proper VPI held by each of said all of said user devices.

5 15. The VPI allocation method for an ATM network system including a network device and a plurality of user devices according to Claim 9, wherein said first specific ATM cell is transmitted at said first transmission step, after completing a connection with said network device.

10 16. The VPI allocation method for an ATM network system including a network device and a plurality of user devices according to Claim 9, wherein said specific ATM cell has a specific VPI and VCI in a cell header.

15 17. The VPI allocation method for an ATM network system including a network device and a plurality of user devices, which comprises the steps of:

a connection step for connecting said network device and a user device; and

a sharing step for holding said VPI in common.

20 18. The VPI allocation method for an ATM network system including a network device and a plurality of user devices according to Claim 17, which further comprises an initializing step for initializing said VPI once held in common by said network device and said user device.